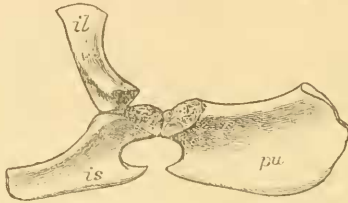


The middle of the bone is rounded and measures 9·5 centim. in circumference; its upper portion is compressed laterally, so that it is only about 1 centim. thick; its greatest width is

Fig. 3.



Pelvic girdle of *Murænosaurus* from the side. *pu*, pubis; *is*, ischium; *il*, ilium. About $\frac{1}{11}$ nat. size.

5·7 centim.; the upper border is curved and bears a groove for cartilage. The inner surface bears scarcely any trace of its junction with the sacral ribs, and the connexion with the vertebræ must have been a very slight one, the whole pelvis having been held firm chiefly by the greatly expanded pubes. The distance between the upper ends of the ilia is about 13 centim.

The dimensions of the associated femora are:—

	centim.
Length	28
Circumference of shaft at the narrowest point	18
Width of distal end	16

Numerous cervical vertebræ, as well as some dorsals and caudals of the same individual, are preserved in the collection.

LIX.—*Description of a supposed new Species of Land-Mollusk of the Genus Parmarion from Pulo Laut, an Island off the South-east Coast of Borneo.* By Lieut.-Col. H. H. GODWIN-AUSTEN, F.R.S., F.Z.S., &c.

[Plate XIX.]

IN a collection of land-shells preserved in spirit, collected by Mr. William Doherty, of Cincinnati, in the islands of the Malay Archipelago, I found two specimens of a slug-like form from Pulo Laut, the island off the south-east coast of Borneo. I hasten to describe it, having early this year, in conjunction with Mr. Walter E. Collinge, published a paper

in the 'Proceedings of the Zoological Society of London' (March 1895, p. 241) on some species from Kina Balu Mountain and Sarawak, in Borneo itself. The animal being very similar in outward appearance, it was a surprise to me to find it, on closer examination, to differ considerably from those we had described. I have great pleasure in naming it after its discoverer, who has proved himself to be a most indefatigable collector, not only of land-mollusea, but more particularly of the Lepidoptera, on which he has written several papers very valuable as regards geographical distribution. Among the land-shells he has placed in my hands are many very interesting species.

Parmarion Dohertyi, sp. n.

Hab. Pulo Laut Island.

Animal (Pl. XIX. figs. 1 and 2).—Length of the largest specimen 20 millim., visceral mass about 6 millim.; length of the smallest 15 millim. The mucous gland and the extremity of the foot is similar to the species from Borneo, placed in *Microparmarion*; but the shell is more globose, and the round, solid, spiral, visceral mass shows this even after the shell is detached. The thicker portion of the shell (fig. 3, $\times 4$) is oval above, flat, thin, becoming a transparent membrane on the posterior and lower portions; its colour is a faint ochraceous tint. It has about $1\frac{1}{2}$ whorls, and the apex being rather closely wound, it is impossible to extract the animal without breaking away a large part of the membranaceous interior portion. This is shown in fig. 4 (a view of the lower side), where a portion is still intact, while it was once continuous over all anteriorly.

The largest shell measures in major diameter 8.0 millim., minor diameter 5.5 millim.

The specimens I have to describe from, having been plunged too suddenly into strong spirit, are very much contracted and hardened; the eye-tentacles are protruding and the anterior portion of the mantle is rolled up, the edges being turned in underneath, so that it is not altogether clear what the form of the shell-lobes might have been when alive and what the portion near the respiratory orifice was like. I have drawn the largest exactly as it is preserved.

The mantle is very closely and distinctly papillate, as is also the posterior side of the foot; this is sharply keeled above. The sole of the foot has a central area. The tentacles are apparently long and dark-coloured. The pallial margin of the foot is not so distinctly marked off from the

portion above as in *Damayantia Smithi* and *Microparmarion*; but the extreme contraction of the specimen may have produced this appearance. This margin of the foot is quite pale in contrast to the very dark colour of the animal.

The shell-lobes are continuous all round the margin of the shell, and would in life leave a more or less exposed apical area of the same; they are clearly divided into right and left lobes. There is a small right neck-lappet.

Anatomy.—The visceral mass is globose and distinctly coiled about one and a half times, terminating bluntly.

The jaw (fig. 8) is curved slightly, with a curvilinear cutting-edge. The lingual ribbon is long and of good breadth; the central tooth is elongate, on a broad base, having a moderately long central point, with basal cusps on either side (as in *Microparmarion pollonerai*); the median teeth are also elongate, with a single cusp on the outer side. The laterals are narrow and elongate, with long, nearly equal, bicuspid points; they become short in length near the extreme margin and of very irregular blunt form (see figs. 9 a-c). The teeth are arranged thus: +30—18—1—18—30+.

Generative Organs (figs. 5, 6, and 7).—The *vas deferens* is given off from the extreme free end of the male organ, there being no flagellum or kalc-sac; the position of the retractor muscle was not well made out, but appeared to be given off rather low down on the muscular sheath. The male organ is folded on itself in S-form, and contained a long spermatophore in process of formation (fig. 6), the short curved spines being observable. Neither the albumen-gland nor the hermaphrodite duct and gland were extracted, as I did not wish to destroy the visceral mass of the largest specimen remaining, and in the small one I failed to find these parts. The spermatheca (fig. 5, *sp.*) was broken near the base, so whether it is ovoid or sessile or elongate is somewhat uncertain; but, judging from the spermatophore, it is of the latter form. The amatorial organ (D) was also incomplete at the free or posterior end, but fortunately the whole of the "sagitta" was well preserved, and on this rested considerable interest; it proved to be very long, rising from a funnel-shaped base and terminating in a fine sharp point, being cut off obliquely like a pen, the total length being 2.6 millim. (figs. 7, 7 a). It is comparable with that of *Parmarion pupillaris* of Java, figured by Heinrich Simroth (pl. viii. fig. 17) in his paper on this group of land-shells in 'Zoologische Ergebnisse einer Reise in Niederländisch Ost-Indien,' 1893. This form of the amatorial organ combined with the other characters places this species very satisfactorily in the genus *Parmarion*,

and extends its range thus further to the eastward. At the same time it is proved to be distinct from *Damayantia* and *Microparmarion*, lately described in the Proc. Zool. Soc.

The type specimen will be sent to the National Collection, South Kensington.

EXPLANATION OF PLATE XIX.

- Fig. 1.* Animal of *Parmarion Dohertyi*, right side, with shell removed. $\times 4$.
Fig. 2. Ditto, ditto, seen from above. $\times 4$.
Fig. 3. Shell. $\times 4$.
Fig. 4. Ditto, lower side. $\times 8$. *a, a*, portion broken away.
Fig. 5. Generative organs (portion of). $\times 8$. P, male organ; *v.d.*, vas deferens; D, amatorial organ; *sp.*, spermatheca.
Fig. 6. Male organ. $\times 30$. *r.m.*, retractor muscle?
Fig. 7. The sagitta amatoria. $\times 24$.
Fig. 7 a. The point of same. $\times 30$.
Fig. 8. Jaw. $\times 24$.
Fig. 9. Central teeth of radula. $\times 368$.
Figs. 9 a-c. Central and outermost teeth, very much enlarged.

LX.—Description of a new Species of *Symphædra*.

By PHILIP CROWLEY, F.L.S. &c.

Symphædra albo-punctata, sp. n.

Male.—Upperside dark chocolate-brown. Fore wing with two very distinct white subapical spots, and a smaller one halfway between the lower subapical spot and the apex of the cell; basal spots small, golden yellow. Hind wing with a submarginal series of small bluish spots and an inner series of similar spots rather larger in size.

Underside brown, tinged with green. Fore wing with the two subapical and the smaller white spots showing very clearly; several other white spots similar to those in *S. cyanipardus*. Under-wing with faint spots of greenish white similarly situated as in *S. cyanipardus*. Antennæ black, with fulvous points.

Female.—Upperside similar to *S. cyanipardus*, but with the spots whiter and larger, the two subapical being very distinct.

Underside similarly marked to *S. cyanipardus*, the colour being much more yellow. Antennæ black, with fulvous points.

Expanse, ♂ 3·6, ♀ 4·4 inches.

Hab. Siam. One male, three females.